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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HSU, ALPUS

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/848,923

Applicant(s)

HAHN ET AL.

Examiner

Alpus H. Hsu

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2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6,9-16,19-26,29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-16,19-26,29 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. Applicant's arguments, see Pre-Brief Conference Request, filed 20 September 2005, with respect to the rejection(s) of claim(s) 1-6, 9-16, 19-26, 29 and 30 under 112, 1<sup>st</sup> paragraph have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of BAKER, CASON, and KRAMER et al..

2. Claims 2, 3, 6, 9, 10, 12, 13, 16, 19, 20, 22, 23, 26, 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2, 12 and 22, it is improper for reciting the limitation of "either dropping or playing the packet based on the comparison and a fullness of the buffer" since it is conflicting with the limitation of "either dropping or playing the packet based on the comparison" in claims 1, 11 and 21 each claim depends on. That is, it is unclear as to what is based on to either drop or play packet out. Is it based on the comparison of energy level or the fullness of the buffer or both?

Regarding claims 6, 16 and 26, it is unclear as to where the step or logic or means for "analyzing the energy level of the payload signal of the packet" is coming from since the step or logic or means is missing from claims 1, 11 and 21, each claim depends on.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 4, 5, 10, 11, 12, 14, 15, 20, 21, 22, 24, 25 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over BAKER in U.S. Patent No. 6,580,694 B1.

Regarding claims 1 and 11, BAKER discloses a method and a set of logic for managing time-sensitive packetized data streams at a receiver (101), comprising: receiving a time-sensitive packet of a data stream (col. 3, lines 3-6); comparing an energy level of a payload signal of the packet to an energy level of a payload signal of a previous packet (col. 6, lines 21-28).

BAKER differs from the claims, in that, it does not disclose the feature of either dropping or playing the packet based on the comparison. However, BAKER does teach a conventional playback mechanism (col. 3, lines 8-11) for dropping or playing packet based on the detection of signal or silence (col. 4, line 64 to col. 5, line 9).

Therefore, it would have been obvious to one of ordinary skill in the art to implement the method and logic in BAKER to either dropping or playing the packet based on the comparison of energy level since it is well known in the art to detect the signal or silence based on the comparison of energy level of payloads between current packet and previous packet.

Regarding claims 2, 10, 12 and 20, BAKER teaches the further steps and logics of: storing the packet in a buffer (col. 3, line 7); either dropping or playing the packet based on the comparison and a fullness of the buffer; and determining whether an overflow condition exists in the buffer (col. 4, lines 1-10).

Regarding claims 4, 5, 14 and 15, BAKER discloses that the time-sensitive packet comprises a real-time packet and the payload signal is a voice signal (col. 3, lines 34-43).

Regarding claim 21, BAKER discloses a system for managing time-sensitive packetized data streams at a receiver (101), comprising: means for receiving a time-sensitive packet of a data stream (101 and col. 3, lines 3-6); means for comparing an energy level of a payload signal of the packet to an energy level of a payload signal of a previous packet (142 and col. 6, lines 21-28).

BAKER differs from the claims, in that, it does not include the means for either dropping or playing the packet based on the comparison. However, BAKER does teach a conventional playback mechanism (col. 3, lines 8-11) for dropping or playing packet based on the detection of signal or silence (col. 4, line 64 to col. 5, line 9).

Therefore, it would have been obvious to one of ordinary skill in the art to implement the system in BAKER to include the means for either dropping or playing the packet based on the comparison of energy level since it is well known in the art to detect the signal or silence based on the comparison of energy level of payloads between current packet and previous packet.

Regarding claims 22 and 30, BAKER teaches the further means for storing the packet in a buffer (col. 3, line 7); means for either dropping or playing the packet based on the comparison

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and a fullness of the buffer; and means for determining whether an overflow condition exists in the buffer (col. 4, lines 1-10).

Regarding claims 24 and 25, BAKER discloses that the time-sensitive packet comprises a real-time packet and the payload signal is a voice signal (col. 3, lines 34-43).

6. Claims 3, 13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over BAKER in U.S. Patent No. 6,580,694 B1 in view of KRAMER et al. in U.S. Patent no. 6,658,027 B1.

Regarding claims 3, 13 and 23, BAKER differs from the claims, in that, it does not disclose the feature of inserting a filler packet based on the comparison and the fullness of the buffer, which is well known in the art and commonly used in audio streaming applications to avoid the discontinuity of signal stream playback.

KRAMER et al., for example, from the similar field of endeavor, teaches the use of filler packet (silence frame(s) in abstract) for smoothing the signal stream playback, which can be easily adopted by one of ordinary skill in the art into the method, logic, and system in BAKER for providing continuity of audio stream playback to improve the system continuity and efficiency.

7. Claims 6, 16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over BAKER in U.S. Patent No. 6,580,694 B1 in view of CASON in U.S. Patent No. 6,249,757 B1.

Regarding claims 6, 16 and 26, BAKER differs from the claims, in that, it does not disclose the feature of analyzing the energy level of the payload signal of the packet by determining a short term average energy of the payload signal; determining a noise floor

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estimate; and comparing the short term average energy and the noise floor estimate, which is well known in the art and commonly used in audio communication for voice activity detection.

CASON, for example, from the similar field of endeavor, teaches the analysis of the energy level of the payload signal of the packet by determining a short term average energy of the payload signal; determining a noise floor estimate; and comparing the short term average energy and the noise floor estimate (abstract), which can be easily adopted by one of ordinary skill in the art into the method, logic, and system in BAKER for providing voice activity detection to further improve the system reliability.

8. Claims 9, 19 and 29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Raman and Nicholls et al. are further cited to show the feature of comparison of energy level between data frames for differentiating between speech and noise and voice activity detection similar to the newly claimed features which can be applied for prior art rejection in future prosecution.


10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHH

A handwritten signature in black ink, appearing to read 'Alpus H. Hsu'.

Alpus H. Hsu  
Primary Examiner  
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